

WHAT IS CLAIMED IS:

1. A content multicasting system provided with a transmitting apparatus for managing content identifiers which uniquely identify contents and content location information indicating locations of said contents and a receiving apparatus for acquiring said contents by inquiring of said transmitting apparatus on the basis of said content identifiers and thereby obtaining said content location information, wherein:

    said transmitting apparatus comprises simultaneous accessibility determining means which extracts contents to be simultaneously released, out of contents for which a delivery schedule representing a delivery period or a release schedule representing a release period is set as attribute information, on the basis of said attribute information; location table registering means for preparing and storing location tables in which content location information on the contents extracted by said simultaneous accessibility determining means and content identifiers of said extracted contents are associated with each other; and location distribution control means for controlling distribution of the location tables registered with said location table registering means to the receiving apparatus, and said transmitting apparatus transmits said location tables to the receiving apparatus; and

    said receiving apparatus comprises location table storage means for receiving said location tables transmitted

from said transmitting apparatus and storing updated location tables out of said received location tables; and

location solution means for acquiring content location information by searching with priority said location tables stored in said location table storage means.

2. The content multicasting system according to Claim 1, wherein a mechanism of data distribution between said transmitting apparatus and said receiving apparatus is configured of a multicasting network using a broadcast network and a telecommunications network, an interactive network using a telecommunications network, or a combination of such networks.

3. The content multicasting system according to Claim 1, wherein said transmitting apparatus is provided with location distribution control means for extracting only a location table concerning contents immediately before release out of the location tables in said location table registering means, and transmits said extracted location table immediately before the release of each of said contents.

4. The content multicasting system according to Claim 1, wherein said transmitting apparatus is provided with simultaneous accessing trend classifying means which stores attribute information on any content whose content location information said receiving apparatus has inquired about and classifies contents to be simultaneously released on the basis of the attribute information on said content, and simultaneous accessibility determining means which extracts contents to

be simultaneously released on the basis of information classified by said simultaneous accessing trend classifying means, and

    said transmitting apparatus transmits a location table in which content location information on the contents extracted by said simultaneous accessibility determining means and the content identifiers of said contents are associated with each other.

5. The content multicasting system according to Claim 1, wherein said transmitting apparatus is provided with location solution information setting means which stores attribute information on any content whose content location information said receiving apparatus has inquired about, generates, for each content, location solution information indicating a method of acquiring content location information on said content at least on the next and subsequent occasions on the basis of the attribute information on said content, and prepares a location solution information table in which content identifiers and location solution information related to said content identifiers are matched with each other,

    said transmitting apparatus transmits said location solution information table to the receiving apparatus, said receiving apparatus is provided with location solution information storage means which receives said location solution information table transmitted from said transmitting apparatus and stores any updated location

solution information table out of said received location solution information tables and location solution means which references said location solution information table with priority and acquires content location information on the basis of location solution information in said location solution information table.

6. The content multicasting system according to Claim 5, wherein said location solution information comprises a combination of all or some of the conditions of acquiring content location information on said content, information on the device which inquires about said content location information, and information for identifying the location table in which said content location information is stated.

7. The content multicasting system according to Claim 5, wherein said receiving apparatus sends said content identifier and a receiving apparatus identifier for uniquely identifying said receiving apparatus to said transmitting apparatus when said receiving apparatus is to inquire of said transmitting apparatus about content location information, and said location solution information setting means of said transmitting apparatus sets location solution information so as to differ from one receiving apparatus to another.

8. The content multicasting system according to Claim 5, wherein said location solution information is so specified as to acquire content location information in said location table transmitted in advance by said transmitting apparatus.

9. A content multicast transmitting apparatus

comprising content registering means which assigns content identifiers for uniquely identifying contents, registers said contents and manages them; distribution schedule setting means which sets a delivery schedule indicating a delivery period, which is content location information on contents registered with said content registering means, and a release schedule indicating a release period, which is included in said content location information; simultaneous accessibility determining means which extracts, on the basis of said content location information set by said distribution schedule setting means, contents to be simultaneously released out of the contents set by said distribution schedule setting means; location table registering means which receives, from said content registering means or said distribution schedule setting means, content location information on the contents extracted by said simultaneous accessibility determining means, and generates and stores a location table indicating a relationship between content location information on said contents and their content identifiers; and location distribution control means which receives said location table generated by said location table registering means and instructs transmission of said location table.

10. The content multicast transmitting apparatus according to Claim 9, further provided with broadcast transmitting means for transmitting data to a broadcast network which makes possible multicasting and/or

communication control means for transmitting data to a telecommunications network which makes possible multicasting and interactive distribution, wherein:

    said broadcast transmitting means and said communication control means transmit data received from said distribution schedule setting means and said location distribution control means, and said communication control means hands over to said distribution schedule setting means the data received from said telecommunications network.

11. The content multicast transmitting apparatus according to Claim 9, wherein said content registering means registers attribute information on the contents to be registered, and said simultaneous accessibility determining means extracts contents to be simultaneously released on the basis of attribute information on the content registered with said content registering means.

12. The content multicast transmitting apparatus according to Claim 9, wherein said location distribution control means extracts only the location table regarding contents immediately before release, and said location table is transmitted by handing over said extracted location table to either said broadcast transmitting means or said communication control means immediately before the release of each of said contents.

13. The content multicast transmitting apparatus according to Claim 9, further provided with simultaneous accessing trend classifying means which receives from said

location distribution control means the content identifiers of contents whose location has been inquired about, acquires, from said content registering means and said distribution schedule setting means, content location information on said contents and/or attribute information on the contents and stores them, and classifies contents to be simultaneously released on the basis of said acquired content location information and the attribute information on said contents, wherein:

the simultaneous accessibility determining means extracts contents to be simultaneously released on the basis of the information classified by said simultaneous accessing trend classifying means.

14. The content multicast transmitting apparatus according to Claim 9, further provided with simultaneous accessing trend classifying means which receives from said location distribution control means the content identifiers of contents whose location has been inquired about, acquires, from said content registering means and said distribution schedule setting means, content location information on said contents and/or attribute information on the contents and stores them, generates, for each content location, solution information indicating a method of acquiring content location information on said contents at least on the next and subsequent occasions on the basis of said acquired content location information and the attribute information on said contents, and prepares a location solution information table

in which content identifiers and location solution information related to said content identifiers are matched with each other, wherein:

    said location distribution control means receives the location solution information table generated by said location solution information setting means and instructs its transmission.

15. The content multicast transmitting apparatus according to Claim 14, wherein said location solution information comprises a combination of all or some of the conditions of acquiring content location information on said contents, information on the device which inquires about said content location information, and information for identifying the location table in which said content location information is stated.

16. The content multicast transmitting apparatus according to Claim 14, wherein said location solution information setting means of said transmitting apparatus so sets said location solution information as to differ from one receiving apparatus to another.

17. The content multicast transmitting apparatus according to Claim 14, wherein said location solution information is so specified as to acquire content location information in said location table transmitted in advance by said transmitting apparatus.

18. A content multicasting receiving apparatus comprising reception monitoring means which receives data

from a transmitting apparatus and monitors out of said data a location table indicating a relationship between location information on contents and content identifiers; reception type determining means which determines a type of the location table detected by said reception monitoring means; location table update managing means which checks for each type updating of a location table received by said reception type determining means; location table storage means which stores the location table in which only contents to be simultaneously released are stated out of the location table determined by said location table update managing means to have been updated; and location solution means which searches with priority location tables stored in said location table storage means and acquires content location information.

19. The content multicasting receiving apparatus according to Claim 18, further provided with broadcast receiving means for receiving data from a broadcast network which makes possible multicasting and/or communication control means for receiving data from a telecommunications network which makes possible multicasting and interactive distribution, wherein said communication control means transmits data received from said location solution means to said transmitting apparatus over said telecommunications network.

20. The content multicasting receiving apparatus according to Claim 18, wherein said reception monitoring means monitors reception of said location solution information

table, and said reception type determining means identifies said location solution information table out of the tables received from said reception monitoring means, the apparatus being further provided with location solution information updating means which receives the location solution information table identified by said reception type determining means and location solution information storage means which stores the location solution information table judged by said location solution information updating means to have been updated, wherein:

    said location solution means references said location solution information table with priority and acquires content location information on the basis of the location solution information in said location solution information table.

21. A content multicasting method using a transmitting apparatus for managing content identifiers which uniquely identify contents and content location information indicating the locations of said contents and transmitting them to a receiving apparatus, and the receiving apparatus for acquiring said contents on the basis of said received content identifiers and said content location information, wherein:

    said transmitting apparatus extracts contents to be simultaneously released, out of contents for which a delivery schedule indicating a delivery period and a release schedule indicating a release period are set as attribute information, on the basis of said attribute information, and transmits

to the receiving apparatus a location table in which content location information on said extracted contents and the content identifiers of said contents are associated with each other, and said receiving apparatus acquires content location information by searching said received location table with priority.

22. The content multicasting method according to Claim 21, whereby said location table is distributed over a multicasting network using a broadcast network and a telecommunications network, an interactive network using a telecommunications network, or a combination of such networks.

23. The content multicasting method according to Claim 21, whereby said transmitting apparatus extracts only a location table concerning contents immediately before release out of the location tables in said location table and transmits said extracted location table, and said receiving apparatus acquires content location information by searching said received location table with priority.

24. The content multicasting method according to Claim 21, whereby said transmitting apparatus stores location information and attribute information on any content whose content location information said receiving apparatus has inquired about, and transmits, on the basis of a result of totaling of said stored location information and attribute information on the content, a location table in which content location information on the content to be simultaneously

released and the content identifier of said content are associated with each other, and said receiving apparatus acquires content location information by searching said received location table with priority.

25. The content multicasting method according to Claim 21, whereby said transmitting apparatus stores location information and attribute information on any content whose content location information said receiving apparatus has inquired about, generates, for each content, location solution information indicating a method of acquiring content location information on said content at least on the next and subsequent occasions on the basis of said acquired content location information and the attribute information on said content, and transmits said location solution information, and said receiving apparatus acquires content location information by giving priority to the method contained in said received location solution information.

26. The content multicasting method according to Claim 25, wherein said location solution information comprises a combination of all or some of the conditions of acquiring content location information on said content, information on the device which inquires about said content location information, and information for identifying the location table in which said content location information is stated.

27. The content multicasting method according to Claim 25, wherein said transmitting apparatus so sets said location solution information as to differ from one receiving apparatus

to another.

28. The content multicasting method according to Claim 25, wherein said location solution information is so specified as to acquire content location information in said location table.

29. A content multicasting system provided with a transmitting apparatus for managing content identifiers which uniquely identify contents and content location information indicating locations of said contents and a receiving apparatus for acquiring said contents by inquiring of said transmitting apparatus on the basis of said content identifiers and thereby obtaining said content location information, wherein:

    said transmitting apparatus comprises location table registering means which prepares and stores a location table in which content location information on contents, a delivery schedule indicating a delivery period of said contents or a release schedule indicating a release period, and content identifiers of the pertinent contents are associated with each other and location distribution control means which controls distribution of the location tables registered with the location table registering means to the receiving apparatus, and transmits said location tables to the receiving apparatus, and

    said receiving apparatus comprises simultaneous accessibility determining means which receives said location table transmitted from said transmitting apparatus and

extracts contents to be simultaneously released on the basis of the delivery schedule or release schedule stated in an updated location table out of said received location tables; location table storage means which stores location tables classified by said simultaneous accessibility determining means into location tables for multicasting use as those to be simultaneously released and other location tables for ordinary use; and location solution means which, when content location information is to be acquired, acquires the content location information by searching with priority said location tables for multicasting use stored in said location table storage means.

30. The content multicasting system according to Claim 29, wherein said simultaneous accessibility determining means further classifies location tables for multicasting use into a plurality of types of location tables for multicasting use.

31. The content multicasting system according to Claim 30, wherein said plurality of types of location tables for multicasting use are further classified by broadcast channel and prepared separately for each broadcast channel.

32. The content multicasting system according to Claim 30, wherein said plurality of types of location table for multicasting use are further classified by telecommunications operator and prepared separately for each telecommunications operator.

33. A content multicasting method using a transmitting

apparatus for managing, being associated with each other, content identifiers which uniquely identify contents and content location information indicating the locations of said contents and transmitting them to a receiving apparatus, and the receiving apparatus for acquiring said contents on the basis of said received content identifiers and said content location information, wherein:

    said transmitting apparatus transmits to the receiving apparatus the location tables in which a delivery schedule indicating a delivery period of said contents or a release schedule indicating a release period are added to said content identifiers and said content location information, being associated with each other, and said receiving apparatus classifies by simultaneous accessibility determination processing to extract contents to be simultaneously released on the basis of the delivery schedule or release schedule stated in said location table into received location tables for multicasting use and location tables for ordinary use and, when contents are to be acquired, acquires content location information by searching with priority the location tables for multicasting use.

34. The content multicasting method according to Claim 33, whereby location tables for multicasting use are further classified in said simultaneous accessibility determination processing into a plurality of types of location tables for multicasting use.

35. The content multicasting method according to Claim

34, whereby said plurality of types of location tables for multicasting use are classified by broadcast channel and prepared separately for each broadcast channel.

36. The content multicasting method according to Claim 34, whereby said plurality of types of location tables for multicasting use are further classified by telecommunications operator and prepared separately for each telecommunications operator.

37. A content multicast transmitting apparatus comprising:

content registering means which assigns content identifiers for uniquely identifying contents, registers said contents matched with these content identifiers and content location information indicating the locations of the pertinent contents, and manages them;

distribution schedule setting means which sets a delivery schedule indicating a delivery period of the contents registered with said content registering means or a release schedule indicating a release period of said contents, the contents being matched with the respective content identifiers;

location table registering means which receives content location information on the contents from said content registering means or the delivery schedule or the release schedule of the contents from the distribution schedule setting means and generates and stores a location table indicating a relationship among the content location

information on said contents, said delivery schedule or release schedule and the content identifiers; and

location distribution control means which receives said location table generated by said location table registering means and instructs transmission of said location table.

38. A content multicasting receiving apparatus comprising:

reception monitoring means which receives data from a transmitting apparatus and monitors out of said data a location table indicating a relationship among location information on contents, a delivery schedule or release schedule of the contents, and content identifiers;

location table update managing means which checks updating of a location table detected by said reception monitoring means;

simultaneous accessibility determining means which, with respect to location tables, judged by said location table update managing means to have been updated, extracts, out of contents included in the location table, contents to be simultaneously released on the basis of said delivery schedule or release schedule and said content location information;

location table storage means which stores the location tables classified by said simultaneous accessibility determining means into location tables for multicasting use as those to be simultaneously released and other location tables for ordinary use; and

location solution means which, when content location

information is to be acquired, acquires the content location information by searching with priority said location tables for multicasting use stored in said location table storage means.